



Indio Water Authority and Sedaru®

No Sooner Said than Done – Moving to Real-Time Communications and Operational Efficiencies with Neptune® and Sedaru®

ENTER THE INTEROPERABLE – THE CREATION OF SEDARU®

The spring 2013 edition of NeptuneNOW documented the success of Indio, California's Indio Water Authority (IWA) as it has reduced costs and cut meter reading time using the Neptune® R900® System, featuring the integrated, wireless E-CODER®)R900i™ encoder/RF MIU.

Now, working with IDModeling, Inc., a Premier Enterprise Partner in Neptune's Connected Utility Partnership Program™, IWA will leverage shared, analyzed data across utility applications to communicate and automate more than just meter reads across departments. With IDModeling's flagship software, Sedaru (See Data Run) – in tandem with proven Neptune R900 RF AMR technology – Indio Water Authority will realize breakthrough functionality for monitoring, analysis, automation, and field mobility.

In December 2011, Luis Cardenas, P.E., IWA Senior Water Engineer, and Paul Hauffen, Founder and CEO of IDModeling, quietly started a revolution. It began, as Hauffen said, “with the idea to unlock and apply valuable information from IWA systems persistently, which were challenging to access otherwise. The original driver of what would become Sedaru was planning – where to put pipes and why, while quantifying project needs and benefits – to prioritize where capital investment would go.”

Cardenas added, “Our concern was that upper management was not getting all the information they needed to make well-informed decisions. They'd have to really search for it, with no way to tie it all together.”

That's exactly the situation which IWA General Manager Brian Macy, P.E., consistently found: “If we wanted to look at the SCADA system, we would



CUSTOMER

Indio Water Authority, Indio, California

SERVICE TERRITORY

Indio Water Authority serves approximately 21,300 accounts in the Coachella Valley of California.

SOLUTION BENEFITS

Correlate SCADA alarms with GIS mapping to investigate possible main breaks

Share and integrate consumption activity data across departments

Real-time data enables more proactive customer service



have to log into SCADA; or, if we wanted to look at our valve maintenance activities from a work management standpoint, we would have to log into our asset management system; or, if we wanted to look at leak detection at a specific meter, we would have to go into Neptune N_SIGHT® software – we asked IDModeling, ‘Is there a software that can bring all these functions together so we can make better decisions in less time?’”

LIVE, OPTIMIZED PERFORMANCE – ACROSS THE UTILITY IN REAL TIME

It soon became apparent that a solution to enable real-time, interdepartmental communications would benefit not only upper management at IWA but also engineering, operations, maintenance, and customer service as well.

“We wanted to take the information from our different data centers – such as SCADA, GIS, and Asset Management – information we gather on a routine basis, record it better, and report it in a holistic format,” said Macy. “We have now gone beyond the original goal for Sedaru by working together with our staff to integrate our asset management application. Sedaru’s open, configurable format makes data useful to more people in our organization.”

Macy added that Sedaru’s ability to coordinate data, communications, and personnel in real time is a tremendous strength. “We can be in the office looking at our GIS map overlays and see instantly whether a valve is turned on or off. With real-time information and the ability to communicate within Sedaru, we can respond proactively, immediately if needed, because we know where our staff and assets are located. If there’s a need to shut down a valve because of a main break, we know which valves to close, which crew is closest, and how best to coordinate the shutdown, thanks to Sedaru.”

As Cardenas attested, on at least one occasion Sedaru has helped rule out a main break. “System operators noticed SCADA alarms for high flow rates at one of our booster stations,” he said. “We referred to Sedaru to see

the SCADA alarms overlaid on the GIS map against our maintenance activities and saw where a valve-turning truck had been flushing hydrants in the vicinity. It wasn’t a main break, but a flushing event; in the past, we would have deployed field crews to investigate the situation unnecessarily.”

NEPTUNE AMR DATA – TOO GOOD NOT TO BE SHARED

Having integrated SCADA and asset management, the next step in IWA’s implementation is to integrate them together with its remotely read water meters. Since beginning a changeout to Neptune’s R900 System in 2006, IWA has enjoyed increased meter reading efficiencies, resulting in labor and time savings. In addition, detailed water consumption data for individual accounts has aided IWA’s conservation initiatives and increased IWA’s level of customer service. Now the team aims to make that automatic meter reading (AMR) information more accessible, more automated, and available to other IWA departments. “We want to share the consumption data from Neptune and integrate it with our SCADA, hydraulics, and asset management data, then make it available to management. We will also be able to perform more analytics around the performance and condition of our assets, especially meters,” said Cardenas. “We intend to compare production data with consumption data to estimated Non-Revenue Water, and then find ways to narrow the gap.”

Going further, Hauffen said, “By sharing Neptune AMR data through Sedaru, work completed in the field becomes available in real time, in a more concise format in which work orders can be assigned proactively to resolve meter-related issues. Thus, enhancing the level of customer service IWA is able to provide – knowing that information instead of learning it after the fact, if at all.”

LOOKING FORWARD TO EVEN MORE IMMEDIATE RESULTS

After Cardenas mentioned the importance of the ability to immediately relay reverse flow condition alerts to

personnel, Macy pointed to still more benefits to be yielded by the integration of the R900 System data with Sedaru. “We will be able to more quickly respond to a meter problem as soon as it is detected, instead of having to wait for the end of the billing cycle,” he said. “Now that we’re going to budget-tiered rates, our customers will be looking to conserve more water. With the Neptune R900 radio frequency technology, we will be able to easily look at a meter’s consumption to see if there are any leaks to be addressed first before conducting a water audit.”

Both IWA, which Hauffen calls one of the most forward-thinking utilities in the country, and IDModeling are looking forward to collaborating with Neptune

to provide better and more timely information for decision making and to optimize operations. Said Macy, “We’re excited about the opportunity to contribute to this software, as it will allow us to deliver a real-time operational solution for all of our staff to use. With our staff having the opportunity to see a more complete picture of our customers’ water use and how efficiently the water is being delivered, we will be able to reduce operating costs and customer service response times.”

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